

Title: Baltimore MUREP Aerospace Academy 2
Institution: Morgan State University
City/State: Baltimore, Maryland
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Summary: The goals of Baltimore MUREP Aerospace Academy 2 (BMAA-2) at Morgan State University are to improve STEM literacy by engaging students, teachers and family members 1. By utilizing NASA developed curriculum enhancement activities that are aligned to National STEM Standards and 2. By the integration of emerging technologies. The objectives of Baltimore MAA will include the following 1. Engage students in hands-on-learning, research, use of advanced technology, peer support groups, and mentoring relationships with professionals working in the STEM fields; 2. Increase the number of historically underserved and underrepresented students interested in NASA specific STEM careers; 3. Provide skills to parents and adult family members to work with and encourage their children in STEM activities and programs; 4. Involve other stake holders in the community such as educational and professional organizations, business, industry, and museums through mentoring, field trips, guest speakers and other MAA activities. To achieve these objectives, the Baltimore MAA at MSU will provide professional development for teachers before and during implementation, conduct year round NASA related STEM activities during the academic year and during the summer for students in grades K-12 and their family members; deliver extended learning opportunities that utilize both NASA and non-NASA STEM-related educational programs and activities and sponsors educational outreach activities and opportunities for individuals throughout the region to increase interest in and exposure to STEM subjects and careers. There will be two academic year sessions that will meet on Saturdays for nine weeks each and four one week summer sessions. During these sessions, students will complete grade specific NASA curriculum enhancement activities that are comprised of hands-on activities and experiments. The Family Involvement Sessions will be conducted concurrently with the Saturday Academy. During the Family Involvement sessions, parents and guardians will attend hands-on workshops and seminars to obtain access to information and training designed to increase their ability to assist their children with math and science activities and the use of technology, as well as, increase parental involvement in the student learning experience.

Baltimore MAA at MSU will partner other stake holders such as The Maryland Science Center, National Aquarium of Baltimore, Maryland Space Telescope Science Institute, NASA Goddard Space Flight Center, etc. to enhance the implementation of STEM outreach activities for students, parents and the community. Baltimore MAA at MSU will provide underserved youth opportunities to participate in special outreach activities, events and/or workshops that are conducted by the project, which engaged the public and showcased NASA's involvement in exploration and discovery such as The STEM Day Extravaganza at Morgan State University. Through these activities, students will gain increased understanding of STEM content and NASA Missions, successfully advance through challenging STEM courses, increase interest in STEM fields and NASA related careers, increase involvement in follow-on NASA and STEM activities at a more

advanced level and increase the number of students selecting a STEM major for post-secondary study. These activities will also increase family participation in STEM experiences. Significance of the proposed work to the objectives of the MAA solicitation and to NASA is that the activities outlined above will ultimately result in an increasing number of students qualified for NASA related STEM employment opportunities.